CLAIMS

What is claimed is:

1. A method for constructing MPEG I-frames comprising the steps of:

2   a) configuring a JPEG engine to produce byte-aligned JPEG data; and

        b) performing JPEG processing, using the JPEG engine, on an uncompressed

4   digital image, producing byte-aligned data; and

        c) reading the byte-aligned JPEG data; and

6   d) converting the JPEG data to MPEG data.

2. The method of claim 1, further comprising the step of storing the MPEG data in

2   an MPEG file.

3. The method of claim 2, further comprising the step of adding file header

2   information to the MPEG file.

4. The method of claim 1 wherein the step of configuring the JPEG engine is

2   accomplished by specifying table generating values that are used by the JPEG

        engine to generate Huffman code tables.

5. The method of claim 1, further comprising the steps of:

2   a) providing conversion tables for converting byte-aligned JPEG data to MPEG

            data; and

4   b) performing the step of converting the JPEG data to MPEG data using the

            conversion tables.

6. A digital imaging device comprising:

2 a) a lens for focusing light; and

 b) an electronic array light sensor for receiving the focused light from the lens;

4 and

 c) a logic unit for controlling the camera and receiving image information from

6 the electronic array light sensor, the logic unit comprising a microprocessor

 system and a JPEG engine, the logic unit adapted to

8 i. configure the JPEG engine to produce a byte-aligned data stream; and

 ii. convert the byte-aligned JPEG data stream to an MPEG data stream

10 representing an MPEG I-frame.

7. The digital imaging device of claim 6 wherein the digital imaging device is a

2 camera.

8. An image compression system comprising:

2 a) means for obtaining an uncompressed digital image; and

 b) means for performing JPEG image processing; and

4 c) means for configuring the JPEG processing means to produce a byte-aligned

 data stream; and

6 d) means for converting the byte-aligned JPEG data stream to a data stream

 representing an MPEG I-frame.

9. A table of byte-aligned codes for JPEG DC coefficients, the table comprising

2 Huffman codes, each Huffman code having a following bit pattern, the combined

lengths of each Huffman code and corresponding following bit pattern being an

4   integer multiple of 8 bits.

10. The table of claim 9, the table comprising nine Huffman codes having lengths of

2   1, 2, 3, 4, 5, 6, 7, 8 and 8 bits, followed by bit patterns of 7, 6, 5, 4, 3, 2, 1, 0, and

8 bits respectively.

11. A table of byte-aligned codes for JPEG AC coefficients, the table comprising

2   Huffman codes, each Huffman code having a following bit pattern, the combined

lengths of each Huffman code and corresponding following bit pattern being an

4   integer multiple of 8 bits.

12. The table of claim 11, the table comprising 130 Huffman codes allocated as

2   sixteen Huffman codes of each length 8, 9, 10, 11, 12, 13, 14, and 15 bits and two

codes of length 16 bits, each code followed by a following bit pattern such that

4   each Huffman code and its following bits consist of 16 total bits.

13. A lookup table that correlates byte-aligned JPEG DC coefficient codes and

2   following bits with equivalent MPEG DC coefficient codes and following bits.

14. A lookup table that correlates byte-aligned JPEG AC coefficient codes and

2   following bits with equivalent MPEG AC coefficient codes.